

**AN OVERVIEW OF THE  
TECHNICAL RESOURCES PROJECT  
OF THE  
DYNAMICS OF RURAL DEVELOPMENT  
RESEARCH PROGRAM**

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**AN OVERVIEW OF  
THE TECHNICAL RESOURCES PROJECT  
OF THE DYNAMICS OF RURAL DEVELOPMENT  
RESEARCH PROGRAM\***

Mario B. Lamberte and Julius P. Relampagos\*\*

The Dynamics of Rural Development (DRD) is a three-year research program implemented by the Philippine Institute for Development Studies, (PIDS) funded under the Technical Resources Project (TRP), a project grant agreement between the National Economic and Development Authority (NEDA) and the United States Agency for International Development (USAID), for the 1991-1994. This research program is a sequel to earlier research projects on the Philippine rural financial market undertaken by PIDS in collaboration with the Agricultural Credit Policy Council (ACPC) and the Ohio State University (OSU). PIDS, ACPC, and OSU had earlier implemented the Comparative Bank Study (CBS) in 1987 which undertook a detailed study on the operations and performance of a sample of rural financial institutions (i.e., rural banks, private development banks, and branches of commercial banks), a study on the financial patterns of a sample rural households and an exploratory research with a few credit unions. The CBS was the first major research project on rural finance PIDS completed in 1988.

In line with efforts of PIDS to promote research undertakings on rural financial markets, the second research project focusing on the operations of sample rural credit unions in the country was conducted jointly with the OSU. At the same time, the rural savings mobilization experiment of a sample of rural banks being undertaken by the ACPC was finalized. Both research activities were completed in 1990.

The implementation of the first two research projects was timely for the medium-term review and assessment of the extent and success of the 1981 financial reforms undertaken by the country, especially in the rural financial sector. Various studies in these projects addressed several rural financial market issues and, through policy recommendations, sought to correct certain distortions and biases created by existing policies in the Philippine financial system. Thus, the research results of both projects produced substantial contribution to the existing literature on Philippine rural finance. More importantly, they were used as inputs to policy reforms being initiated by the Central Bank and the preparation of several congressional bills.

For the Comparative Bank Study, the first research project, the following studies were completed (see Annex 1 for the summary of findings of the individual studies):

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\*\*Project Director and Assistant Project Director, respectively of the Project Management Office, Dynamics of Rural Development Research Program.

1. Abiad, Virginia G., Douglas H. Graham and Carlos E. Cuevas. "Borrower Transactions Costs and Credit Rationing in Rural Financial Markets: The Philippine Case," *Working Paper Series No. 88-17*, Philippine Institute for Development Studies, 1988.
2. Blanco, Rheneé and Richard L. Meyer. "Rural Deposit Mobilization in the Philippines, 1977-1986," *Working Paper Series No. 88-15*, Philippine Institute for Development Studies, 1988.
3. Corrales, Irma C. and Carlos E. Cuevas. "Cost of Agricultural Credit in the Philippines: The Short-Run Effects of Interest Rate Deregulation," *Working Paper Series No. 87-02*, Philippine Institute for Development Studies, 1987.
4. de Jesus, Raquel Clar and Carlos E. Cuevas. "The Demand for Funds Among Agricultural Households in the Philippines," *Working Paper Series No. 88-21*, Philippine Institute for Development Studies, 1988.
5. Lamberte, Mario B. "Comparative Bank Study: A Background Paper," *Working Paper Series No. 87-04*, Philippine Institute for Development Studies, 1987.
6. Lamberte, Mario B. "The Role and Performance of Cooperative Credit Unions in the Rural Financial Markets: Some Preliminary Results," *Working Paper Series No. 88-24*, Philippine Institute for Development Studies, 1988.
7. Lapa, Ma. Lucila A. and Douglas H. Graham. "Credit Rationing Under a Deregulated Financial System," *Working Paper Series No. 88-19*, Philippine Institute for Development Studies, 1988.
8. Magno, Marife and Richard L. Meyer. "Guarantee Schemes: An Alternative to the Supervised Credit Program," *Working Paper Series No. 88-23*, Philippine Institute for Development Studies, 1988.
9. Relampagos, Julius P. and Mario B. Lamberte. "Funds Transfer Operations: Boon or Bane to the Viability of Rural Financial Intermediaries?," *Working Paper Series No. 88-22*, Philippine Institute for Development Studies, 1988.
10. Rodriguez, Jocelyn Alma and Richard L. Meyer. "The Analysis of Savings Behavior: The Case of Rural Households in the Philippines," *Working Paper Series No. 88-20*, Philippine Institute for Development Studies, 1988.
11. Saldana, Cesar G. "Comparative Management Structure and Institutional Performance in Rural Banking Institutions," *Working Paper Series No. 88-16*, Philippine Institute for Development Studies, 1988.
12. Untalan, Teodoro S. and Carlos E. Cuevas. "Transactions Costs and the Viability of Rural Financial Intermediaries," *Working Paper Series No. 88-18*, Philippine Institute for Development Studies, 1988.

Under the second project, the following studies on credit unions and rural savings mobilization project were completed (see Annexes II and III):

1. Lamberte, Mario B., Julius P. Relampagos, and Douglas H. Graham. "Credit Unions: An Underrated Mode of Mobilizing and Allocating Resources in Rural Areas," *Working Paper Series No. 90-21*, Philippine Institute for Development Studies, 1990.
2. Badiola, Jocelyn Alma R. "Dependency, Education, Attitudes and Household Savings: Empirical Evidence from the Philippines," Agricultural Credit Policy Council, 1990.
3. Badiola, Jocelyn Alma R. and V. Bruce J. Tolentino. "Deposit Mobilization in Rural Banks: The Impact of Alternative Strategies," Agricultural Credit Policy Council, 1990.
4. Chan, Florida and V. Bruce J. Tolentino. "Income, Savings and Deposit Performance: Evidence Among Rural Households in the Philippines," Agricultural Credit Policy Council, 1990.
5. de Jesus, Raquel Clar and V. Bruce J. Tolentino. "The Saving and Deposit Performance of Philippine Rural Households: Advanced vs. Backward Areas," Agricultural Credit Policy Council, 1990.
6. Magno, Marife and V. Bruce J. Tolentino. "Interest Rates and Savings Mobilization: Empirical Evidence from the Philippines," Agricultural Credit Policy Council, 1990.

The recent developments taking place in the rural areas (i.e., implementation of agrarian reform and rural industrialization policies) will bring about a profound impact on the rural sector, in general, and on its financial market, in particular. In this regard, the macroeconomic environment and the rural financial market are expected to play a new major role in these efforts to pursue rural development. Thus, the implementation of the Dynamics of Rural Development (DRD) research program assumes a timely significance as it is expected to generate data pertinent in addressing issues concerning rural development.

The TRP-DRD research program has two major thrusts:

- to extend the research program currently being implemented by the Institute to include the areas of agrarian reform and rural non-farm enterprises; and
- to expand the capacity of PIDS and other institutions to conduct research, and to disseminate the analytical results to decisionmakers to incorporate them into the design of new policies, strategies, and projects as well as to researchers for their research agenda.

Two major components comprise the TRP-DRD research program: research on the probable impact of the Comprehensive Agrarian Reform Program (CARP) on the Philippine economy; and research on the financing of rural non-farm enterprises.

With regard to the first component, it is essential that a thorough study of the potential impacts of CARP on rural productivity and incomes be made before full implementation of the reforms, so that appropriate adjustment mechanisms and policies can be put in place to reduce and shorten the disruptive impact of such policy. Agrarian reform involves a major restructuring in socio-economic relationships, and is thus almost always accompanied by a disruption of the traditional systems of delivering inputs, credit, and the marketing of products, to the extent that these systems are tied to the operations of the large landholders who will be dispossessed. Thus, the government will have to determine where and to what extent the disruptive consequence of land reform will likely occur, identify how economic agents will adjust to these disruptions, and then take these adjustments into account in designing the measures meant to lessen the effect of such disruptions, especially on the credit market. In this component, crops and industries to be covered include coconut, sugar, rice, livestock, and fisheries.

In the second component, this research program will generate information needed to analyze financial services issues from both the perspective of the financial institutions and the rural non-farm enterprises. This effort will be part of a larger program by PIDS and ACPC to explore the impact of the rural non-farm sector on agricultural production and employment and on regional development, and vice-versa. It will contribute to an understanding of how the demand for financial services by farm and non-farm enterprises in rural areas affects the opportunities and need for financial intermediation.

The implementation of the TRP-DRD research program is divided into two phases. Phase I deals with the development of the research program calling for the identification of the research topics and the preparation/conduct of the state-of-the-art reviews for these individual prospective topics as the expected output. This phase will be carried out for six months from April to September 1991. Fourteen papers are expected to be produced in Phase I. Phase II will be devoted for the actual implementation/conduct of the study for the individual research topics identified and approved by the Steering Committee during the final stage of Phase I, and the publication/dissemination of the research results. Phase II will be carried out from October 1991 up to March 1994. Ten studies are expected to be produced in Phase II.

Several researchers from different institutions and agencies with expertise in macroeconomics, rural development, and finance will assist PIDS in implementing the major thrusts of the DRD research program.

This consultation-workshop is the first of a series of seminar- workshops to be conducted throughout the duration of the DRD research program. The objectives of this consultation-workshop are twofold: to discuss current issues and developments in the rural sector, especially those concerning agrarian reform and rural non-farm enterprises; and to identify the research gaps and problems that need to be addressed in the formulation of policies related to rural development. Thus, the results of this consultation-workshop provide an important input in preparing a research agenda for Phase II of the research program which involves the actual conduct/implementation of the various studies to be identified based on the results of the state-of-the-art reviews.

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**ANNEX I**

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**COMPARATIVE BANK STUDY****"Comparative Bank Study: A Background Paper"**

by Mario B. Lamberte

*Objectives of the Study*

This paper provides a general background to the abovementioned research project. The main objectives are: (1) to review existing banking regulations; (2) to describe the performance of the financial system in the most recent past; (3) to compare the performance of commercial banks (KBs), private development banks (PDBs), and rural banks (RBs) by the region; (4) to test the "interest rate" and "institution elasticity" hypotheses, using a combination of time series (1983-85) and cross-section data (13 regions and three categories of banks, namely KBs, PDBs and RBs); and (5) to examine the performance of individual commercial banks.

*Findings*

In 1980, a package of financial reforms was implemented in the country with the following objectives: (1) to increase competitive conditions among banks, and (2) to increase the availability of and access to longer term funds. Included among the features of the financial reforms are: (1) the creation of universal banks which have expanded commercial banking functions; (2) encouraging mergers/consolidations to reduce the number of banks to achieve their optimal size; (3) promotion of bank branching which, for the first time, allowed rural banks to open branches although limited to the region where the main branch is located; (4) making the reserve requirement uniform across different types of short-term deposit liabilities (i.e., deposits with maturities of 730 days or less), but not across different types of banks; (5) deregulation of the bank interest rates; (6) the phasing out of credit subsidies; and (7) encouraging banks, particularly KBs, to increase the share of medium- and long-term loans in the total loan portfolio of banks.

However, there were certain regulations that impinge on the promotion of bank branching. These include: (1) the CB's policy requiring banks opening up new branches to purchase five-year special government or Central Bank securities according to service area classification; and (2) the imposition of the deposit retention scheme which requires banks to lend 50 percent of the total deposits mobilized by branches of banks in the same service areas.

The differential reserve requirement across different types of banks is geared to offset the cost advantages enjoyed by bigger banks. The recent experience, however, shows that bigger banks bought thrift and rural banks. Thus, they also enjoy such privilege.

During the financial crisis, many of the banks collapsed due to over-dependence on the Central Bank rediscounting facilities and poor supervision, not due to cutthroat competition. This was specifically true for rural banks which constitute by far the most restricted banking system.

While bank interest rates were deregulated, the cheap rediscounting policy of the Central Bank favoring certain economic activities continued. Only in November 1985 did the Central Bank shift its emphasis from credit allocation to stabilization functions.

Simultaneous with phasing out credit subsidies is the introduction of risk-reducing guarantee schemes in addition to the crop insurance scheme for rice and corn. These are the Industrial Guarantee Loan Fund (IGLF), Guarantee Fund for Small and Medium Enterprises (GFSME), Comprehensive Agricultural Loan Fund (CALF), and Quedan Financing Program. There are still a few special credit programs, however, which are primarily aimed at supplementing the funds of the banking system like the DBP-SSS Financing Program, and the Agricultural Loan Fund.

Certain regulations impinge on the intermediation cost. The currently high reserve requirement, the 25 percent agri/agra loan requirement and the five percent gross receipts (GRT) tax are taxes imposed on intermediation. In a competitive environment, all these taxes are supposedly absorbed by financial intermediaries. Such environment does not exist in the Philippines. So, banks fully pass on this tax burden to borrowers, who pay a rate higher than when such intermediation taxes are absent.

The Philippine financial system has been compared with Thailand and Korea. One indicator used was the flow of loanable funds using the ratio of the stock of money to gross domestic product. The 1980 financial reform undertaken by the Philippines produced a positive effect on the ratio. Towards the latter part of 1983, Korea and the Philippines encountered financial difficulties. However, the impact on the ratio was more severe in the Philippines than in Korea, suggesting that the latter has a more solid financial system.

Another indicator of the performance of the financial system is the competitiveness of the banking system and efficiency with which it raises and allocates funds. The increased competition among banks was expected to result in the narrowing of the spread between lending and deposit rates. Surprisingly, after the financial reforms were implemented, the banks' spread widened, implying that borrowers were paying more when the interest rates started to be deregulated.

KBs' deposit mobilization is more extensive than PDBs and RBs. Likewise, KBs have the highest ratio of deposit liabilities to total resources among the three groups of banks. In 1985, the loans-to-deposit ratios of KBs in almost all regions were surprisingly below 50 percent. It should be pointed out that KBs are covered by the deposit retention scheme and thus, the ratio should not have gone below 50 percent. This suggests the need for stricter enforcement of the regulation. Most of the deposit funds of the branches of commercial banks could have gone to the NCR since the loan to deposit ratio in this region exceeds 100 percent. PDBs' and RBs' loan-to-deposit ratios greatly exceed 100 percent in almost all regions and years. Indeed, a significant proportion of their loans was supported not by deposits but by borrowings from the Central Bank and other government agencies with special credit programs.

The study also attempted to examine the hypotheses concerning elasticity of interest rate and institution. The presence of more banking institutions in the regions has apparently a greater impact on deposits than high interest rate there. This seems reasonable since high interest rate means nothing to people in the provinces if access to financial institutions is nil.



The study also examined the demand for deposit instruments of KBs, PDBs, and RBs. Deposits with KBs are found to increase alongside with an increment in the interest rate on deposits. This is not however the case with PDBs and RBs. This is far from surprising since many depositors shifted their deposits from small to bigger banks and from thrift and rural banks to branches of commercial banks perceived to be relatively more stable during the financial crisis period. The empirical results also reveal that the number of offices has a significant positive effect on deposits with KBs, PDBs, and RBs.

## **"Funds Transfer Operations: Boon or Bane to the Viability of Rural Financial Intermediaries?"**

by Julius P. Relampagos and Mario B. Lamberte

### *Objectives of the Study*

The study addressed the following:

- what is the structure of funds transfer operations of rural-based branches of banks - is it from one branch to another or is it from one branch to the head office?
- what factors determine the volume of funds transferred from one branch to another of the same bank?
- what is the impact of funds transfer operations on the savings mobilization efforts of rural-based financial intermediaries?

### *Findings*

Funds flow directly or indirectly from branches operating in the rural areas to the urban-based head offices, specifically the National Capital Region. For branches in the Visayas and Mindanao, surplus funds are channelled to the area/regional office which, in turn, moves them to the head office. Branches operating in areas near the head office transferred excess funds directly to the head office through an armored vehicle.

Over 80 percent of the total KB sample transferred excess funds to their head offices in Metro Manila in 1986. This implies that rural-based branches of commercial banks are a potential source of funds by the head offices. On the other hand, 73 percent of the total PDB sample transferred funds to their head offices in the same year. However, a majority of the PDB branches also received funds from head offices.

One-third of the sample branch managers considered the poor viable loan demand in rural areas as one factor why their branches accumulated excess balances. This perception is due to the fact that bank branches prefer to accommodate large loans, while most production loan requirements in the rural areas are small. This is reflected in the relatively high minimum loan size requirement imposed by bank branches. Enforcement of the minimum loan size requirement disqualifies small borrowers. This requirement suggests that KBs and PDBs are oriented toward the urban commercial sector where large borrowers engage in large agribusiness, manufacturing, and trading operations.

Other branch managers claimed the transfer of surplus funds to the head office is done to comply with bank management policies. Implied in this result is the control in the decision-making functions of the branches with regard to the use of the financial resources being mobilized. The findings show that KB branches are more regulated than PDB branches. This regulation comes in the form of determining the amount of funds to be transferred and the

amount of loans to be approved at the branch level. Head offices determine the amount of funds to be transferred from the branch to the head office in the case of KBs, while branch managers of PDBs make such decision. In terms of branch's discretion to approve loans, KB branches appear more restricted than their PDB counterparts.

The decision of a branch to transfer or borrow funds to or from another branch is determined by the lending rates, transfer pool rates, deposit interest rates, and transaction cost on lending. This was tested empirically where significant correct signs were obtained. In the empirical model, the ratio of net transfers to total deposits of the sample branches is used as the dependent variable. The results show that a higher transfer pool rate relative to the lending rate has a positive effect on the amount of funds transferred. Likewise, an increment in the deposit interest rates offered to the depositors increases the volume of deposits mobilized and, consequently, the amount of funds transferred. Lastly, a high transactions cost on lending induces "selective" lending among branches, resulting in the accumulation of surplus funds to be transferred.

In the savings mobilization empirical model, the transfer pool rate was used as a variable to determine the impact of funds transfer operations on deposit-taking activity of branch banks. The variable yielded significant positive sign, implying a favorable effect of the funds transfer operations on the deposit mobilization efforts of the branches of commercial banks and private development banks.

#### *Policy Implications and Recommendations*

The availability of funds transfer mechanism among branch banks provides an outlet for surplus funds at the branch level. Such mechanism helps intensify branch bank's efforts at rural savings mobilization. In spite of the seasonal funds flow in rural areas, branches worry not a bit about having possible outlets for deposit funds; they can always resort to moving them to other branches faced with high level of demand for credit in their service areas.

In the light of the results of this study, certain government policies need to be re-examined. Specifically, the deposit retention scheme directly works against the objective of banks, especially in the branch banking system, to maximize profit or net returns on present cash flows through better allocation of financial resources from surplus to deficit branches. Banks ought to be allowed to direct funds to the most profitable uses, or obtain funds from the cheapest source whenever they experience temporary liquidity problems. Likewise, the deposit retention may work against the efforts of banks to mobilize rural savings as savers will not be offered attractive deposit interest rates.

That most bank branches in the rural areas transferred their excess funds to the urban centers is an open invitation to fine-tune policies so as to effect economy-wide structural changes. These include removing the deposit retention policy and introducing a more liberal branching policy to attract more banks to expand their rural banking services.

The absence of funds transfer operations in the unit banking system should be considered seriously in framing government policies which aim to increase credit supply in the rural-agricultural sector and, at the same time, to ensure the viability of rural-based financial institutions. Perhaps, the appropriate policy here is to encourage unit banks to strengthen linkages among themselves and/or with branches of KBs and PDBs in other areas to effect interbank funds transfer operations. However, the agri/agra requirement and deposit retention policies impede such development. Also, the single borrower's limit set at 15 percent of the bank's unimpaired capital and surplus can hinder unit banks with excess funds from lending to deficit unit banks or branch banks, as the case may be. Thus, removing such restrictive banking policies to allow unit banks to effect funds transfers would greatly benefit them.

## **"Credit Rationing Under a Deregulated Financial System"**

by Ma. Lucila A. Lapar and Douglas H. Graham

### *Objective of the Study*

The main objective of this study is to provide empirical support for the continued existence of credit rationing in a deregulated financial system. This study will look into the existence of credit rationing among banks in the rural financial markets of the Philippines, and determine the rationing mechanisms used by each type of bank (RBs, PDBs, and KBs) in allocating credit. The intensity and incidence of credit rationing among these banks will also be compared.

There are three stages of rationing pointed out in this study: screening stage; formal processing stage; and quantity rationing stage. The screening and acceptance/rejection rationing behavior of branches of KBs and PDBs is more restrictive than those for RBs as seen in their respective approval rates. These differences in the degree of screening and rationing may be due to operational differences among these banks. Among these differences would be the fact that RB managers generally know their customers well and are knowledgeable about the kinds of activities for which their clients are borrowing. Thus, the greater incidence of screening and loan rejection for KBs and PDBs arises out of their relative bias for greater prudence and risk aversion, combined with less institutional concern for engaging in local loan activity.

The rationing behavior of the three types of banks is influenced by factors such as the capacity to pay, bank-client relationship, and collateral. RBs exhibit a strong bias towards a well-developed bank-client relationship in their rationing behavior.

The data on quantity rationing among PDBs and RBs strongly suggest that the degree of quantity rationing among these two banks differ because of loan and borrower characteristics considered by each bank. Quantity rationing or reducing the amount applied for can take place only when the bank discovers certain additional characteristics of the borrower, e.g., loan delinquencies with other banks, that warrant such action.

Two types of models were estimated to test for factors that explain the quantity-rationing behavior of PDBs and RBs: quantity-rationing model; and qualitative-response model. A positive sign implies less rationing and a negative sign, more restrictive rationing. In terms of quantity rationing model, for RBs, the variables interest rate, area of land, and the number of dependents yielded significant positive signs, while the variables loan maturity and cash crops yielded significant negative signs. For PDBs, the variable collateral-loan ratio yielded significant positive sign, while the variables loan maturity and number of dependents produced significant negative signs. In the results of the qualitative response model, borrowers of longer term loans are more likely to be rationed than those of shorter term loans in the case of RBs. For PDBs, a borrower with a high income level and a longer term loan has a higher probability of being rationed. This is consistent with the known practice of PDBs requiring reasonably well-off borrowers to participate in longer term loan financing through larger equity contributions.

### *Policy Implications and Recommendations*

The results of this study have established empirical support for the existence of credit rationing in the rural financial markets. These results confirm the theoretical argument that credit rationing is still possible in a deregulated financial system characterized by imperfect information. In the Philippines, this imperfect market for information was reinforced by the growing risks of financial activity in the recessionary environment of the 1980s.

The results of this study also suggest that market-oriented credit policies (with appropriately realistic interest rates) are likely to be similarly limited in expanding access to small or marginal borrowers due to the constraints imposed on the system through imperfect information. Thus, measures which can help reduce risks and minimize the costs of acquiring information may have to be initiated. These include the use of non-government organizations (NGOs) or private volunteer organizations (PVOs) to sort out and prepare a roster of "good" small farmer clientele for banks. The existing guarantee programs which can help reduce the risks of banks may also have to be streamlined and efficiently implemented to better serve their target beneficiaries. To some extent, promoting rural credit unions creates the potential for an institutional actor that could serve a large number of this marginal clientele.

A final issue merits comment in this conclusion, namely, the troublesome link between the findings on credit rationing in this study and the prospective land reform. The viability of rural financial institutions will be affected through the declining value of the collateral assets (i.e., mortgaged property) they have included in their ongoing loan contracts and the foreclosed land assets they hold in their portfolio. In the former case, farmers owning more than the retention limit may stop repaying the bank on their loans secured by these land titles on the assumption they will lose their land through expropriation.

## **"The Analysis of Saving Behavior: The Case of Rural Households in the Philippines"**

by Jocelyn Alma Rodriguez and Richard L. Meyer

### *Objectives of the Study*

This study attempts to examine the saving behavior of Filipino rural households. The specific objectives are: (1) to verify the capacity of the rural households in the Philippines to save; (2) to determine the factors that influence saving behavior; and (3) to examine the forms in which savings are held and identify the factors that influence financial savings.

### *Findings*

An average household saved about P6,901 during the period and positive marginal propensities to save (MPSs) ranging from 58 percent to 89 percent were estimated for groups of households classified according to income group, occupation and farm size. The professionals posted the highest MPSs (89%) followed by the pension-earners and recipients of income from abroad (84%). The farmers registered an MPS of 66 percent. The farmers were further classified into six farm-size groups. No distinct trend in MPS with respect to farm size could be determined.

There were three savings models estimated in this study. Saving, as the dependent variable, is defined as the residual left after deducting consumption from income. Specifically, saving was regressed on current, permanent and transitory incomes, wealth, dependency ratio, education, occupation, age, and transaction costs. In model 1, the variables current income, wealth, and occupation yielded significant expected signs, supporting the hypotheses that these variables have direct and positive impact on saving. In model 2, permanent and transitory incomes yielded significant positive signs with a coefficient for transitory larger than permanent income. This supports Friedman's hypothesis that people tend to save more out of transitory income. In model 3, the variables permanent and transitory incomes, occupation, and dependency ratio yielded significant correct signs.

Physical assets dominated the saving and asset portfolios of rural households. The residential house and lot accounted for the largest percentage, followed by farmland, consumer durables. By type of occupation, household savings also appear in the form of physical assets. Except for professionals, a very small proportion of household savings is in the form of financial assets (such as bank deposits or non-bank deposits) for other types of occupation.

Two models were formulated and tested in order to examine the determinants of the demand for financial assets. In model 1 using bank and non-bank deposits as the dependent variable, permanent income, transitory income, and interest rate on time deposit variables yielded significant correct signs. The same results were obtained in model 2B, using only bank deposits as the dependent variable. In both models, transaction costs appear to be an insignificant variable, affecting household decision to save in the form of bank deposits.

### *Policy Implications and Recommendations*

Measures to spur rural savings are called for, since income appears to be the most important economic variable affecting such savings. There is need for income-increasing incentives to encourage farm investment such as facilitating the introduction of improved technology, providing appropriate farm support services and long-term measures toward the creation of employment opportunities. Well-designed rural savings mobilization programs should be implemented to further harness the potential for voluntary savings. Since more are saved out of transitory incomes, spurts in income are therefore highly susceptible to savings opportunities and incentives. Likewise, carrying out a widespread population growth reduction program, raising educational standards, and implementing market-oriented interest rate policies will help increase the volume of rural savings.



## **"The Demand for Funds Among Agricultural Households in the Philippines"**

by Raquel Clar de Jesus and Carlos E. Cuevas

### *Objective of the Study*

This paper addresses the interdependency of farm household decisions by quantifying a demand for credit that considers both the household's loan needs and its overall liquidity position. Several key issues surrounding the interdependent decisions approach are discussed here. The controversy about simultaneity in farm household models is reviewed. A preview of the linkages between different components of the household's liquidity management is presented. The variables likely to influence the demand for funds under interdependency of farm decisions are discussed.

### *Findings*

The asset structures of the farm families indicate an apparent accumulation of fixed and intermediate assets and shows lesser amounts of the more liquid financial assets. Although household possessions are mostly held in fixed forms, an important proportion of farm households maintains assets in more liquid form such as livestock and poultry. These assets can provide households with funds during troughs or emergencies.

Landowners maintain more farm assets and consumer durables with values not as large as those kept by leaseholders. Landowners have the strongest incentive to increase income from production through increased investment in the farm. Because of the temporary nature of a leasehold contract, leaseholders tend to hold higher values of non-land farm assets and consumer durables.

Most of the savers are small landowners and share tenants. The information on landowners confirms the observation they face incentives to produce more and subsequently save more because they own the land from which their income is derived. In the case of share tenants, they enjoy the same protection provided by law to landowners. Thus, the tenancy arrangement does not restrain them from producing and saving.

Despite relatively higher nominal and effective interest rates in the informal market, the data show more loans are provided by informal lenders than banks and other formal lending institutions. The smaller size of an informal loan relative to a formal loan may explain the higher effective rate in the informal sector. Small loans, sourced mostly from the informal sector, bear higher transactions costs, making the effective rate inversely proportional to the loan size.

Full owners and amortizing owners of land borrow larger amounts than leaseholders and share tenants. Full owners also derive bigger loans from formal sources while amortizing owners prefer informal sources. This reflects the banks' bias towards collateralized loans since the fully-owned farmlands serve as acceptable collateral.

The empirical analysis specifies a simultaneous equations model comprised by the interest rate (price determination) equation (supply side) and the demand for funds equation (demand side).

### *Policy Implications and Recommendations*

From the empirical analysis, on the demand side, membership in farm organizations emerged as one of the significant variables that reduce the demand for funds. This suggests the ability of the farm organizations to finance the needs of its farmer-members and the relative efficiency of farm organizations in providing financing and marketing services to members. Thus, strengthening the existing viable cooperatives through access to financing deserves positive attention.

The significant positive consequence of effective interest rates reflects the interplay of external borrowing and internal financing in the total demand for funds by the farm household. When effective interest rates rise and farm operations are threatened by low levels of external financing due to an increase in interest rate, farm households can supplement inadequate funds with external lending, financial assets, or consumer durables. Hence, the farm family can maintain relative stability in production, income and consumption despite unfavorable weather conditions and price fluctuations.

The variables incorporating loan purpose, education, previous bank patronage and borrowings were found to be the most important variables determining effective interest rates on loans to agricultural households.

The study supports the interdependent approach analyzing farm households' demand for funds. Therefore, the approach on rural finance by policymakers should be comprehensive and not limited to "agricultural credit programs". The policies of the government should therefore be geared towards the enhancement of funds flow. Policies and programs which increase the cash flow of the households, such as risk-reduction programs, the provision of off-farm income and employment opportunities and other measures that will increase the cash holdings of farm families and increase the financial flows in the community are called for. Likewise, in an environment characterized by fragmented markets in developing countries, funds flow may be enhanced through measures reducing fragmentation. These may be policies allowing freedom of movement (i.e., free market forces), lower transactions costs and minimum market constraints (financial liberalization). Priority must be given to efficient handling of goods and services, particularly farm support services like irrigation, infrastructure, etc.

## **"Costs of Agricultural Credit in the Philippines: "The Short-Run Effects of Interest Rate Deregulation"**

by Irma C. Corrales and Carlos E. Cuevas

### *Objective of the Study*

This paper analyzes the agricultural credit scenario prevailing in the Philippines at the time of the major deregulation of interest rates in 1984. The study focuses on the institutional costs of lending to agriculture and on immediate effects deregulation bore on these costs. Costs of lending to non-agricultural sectors and similar studies in other selected countries are used as frames of reference in the analysis.

### *Findings*

The problems in agricultural credit may be classified broadly into: limitations on the supply of formal credit to agriculture and weakness in the institutional financial infrastructure or agricultural credit. With regards to the first problem, agricultural financing has developed a marked dependence on the rediscount window of the Central Bank to a much larger extent than the non-agricultural sector. Since rediscounting is subject to limitations imposed by domestic credit ceilings, the tightening of this window in 1984 in response to economic and financial difficulties had seriously disabled agricultural credit. On the problem of institutional weaknesses, no single institution is designated to play a lead role in agriculture and catalyze financing support on a wider scale. The agriculture financing performance would seem to indicate the neglect of the sector among public and private institutions, where agriculture credit formed a minor stream in their lending portfolio. This "neglect" is viewed in the context of the social infrastructure and policy environment for agriculture development which did not favor investments in the sector.

In July 1981, as part of an overall package of economic liberalization reforms, a floating interest rate policy was adopted in the Philippines. While removal of ceilings on all types of deposits and loans with maturities of over two years were immediately effected, ceilings on short-term loans remained in place until January 1983. In March 1984, the Central Bank (CB) realigned its lending rate to banks and end-users under its rediscount window to the Manila Reference Rate (MRR system). Thus, for the first time, floating rates were adopted for supervised and non-supervised agricultural credits as well as for non-traditional exports, cottage industry loans, and other special programs. The sharp rise in rates made the CB window a more expensive source relative to deposit funds.

Lending costs of agricultural loans were greatly affected by deregulation in all banks except Land Bank of the Philippines (LBP). The main factor explaining this effect is the increase in cost of funds. The cost of funds rose substantially more for agricultural loans. Even though the share of costs of funds in total lending costs pre-deregulation was smaller for agricultural than for non-agricultural loans, this factor was able to offset the differential increase in cost of funds only in the case of the LBP. These results suggest the realignment of rediscount rates affected by

relatively more agricultural lending than non-agricultural loans. Banks tended to rely more upon cheap rediscount funds in their lending to agriculture than they did for operations with other sectors. But on the other hand, the six to sevenfold increase in rediscount rates implemented in 1984 generated specific increases in costs of funds much larger for agricultural loans than for loans to other sectors due to their heavier reliance upon rediscount funds. As a result, overall lending costs to agriculture increased more than the cost of lending to other sectors.

The bank most affected by deregulation was the Philippine National Bank (PNB). Heavy reliance on rediscount funds pre-deregulation determined that the specific increase in cost of funds for this bank was highest of all banks in the sample.

Net returns for agricultural and non-agricultural loans appear to have improved with the adoption of the floating rate system for all types of loans. During the post-deregulation period, however, positive returns were experienced by all institutions except the Development Bank of the Philippines (DBP), in at least one type of loan activity. Overall, considering the entire loan portfolio of banks, all of them except DBP and rural banks were able to realize gains with the lifting of ceilings on interest rates for all types of loans.

#### *Policy Implications and Recommendations*

Lagged effects of deregulation, affecting the non-interest components of lending costs, remain to be investigated. More flexible interest rates should have allowed reductions in costs of loan administration and risk expenses, essentially through substitution effects. However, the period post-deregulation has been one of economic recession, a factor that increases risk and possibly default rates. This may tend to increase explicit risk expenses (e.g., via litigation fees), and costs of administration due to the need for more careful screening of loan applications. Therefore, the net effect of deregulation on these non-interest components of lending rates should be investigated, controlling for the effects of overall economic performance.

## **"Rural Deposit Mobilization in the Philippines, 1977-1986 "**

by Rhenee Blanco and Richard L. Meyer

### *Objective of the Study*

This paper aims to document and describe rural deposit mobilization in the Philippines in light of recent government attempts to reduce the urban bias of financial development. The period covered in this analysis is 1977-1986.

### *Findings*

The factors considered important in determining rural deposits may be categorized as follows: scope of opportunities for financial asset holdings; incentives for savers; and opportunities and incentives to save.

In 1977-1986, compared to urban areas, the rural areas represented the largest share of gross domestic product (GDP) and population, and the largest number of banking offices, but a sparser bank density ratio and over 40 percent of the rural municipalities had no bank office at all. Efforts to increase access to rural banking facilities essentially failed during this period as shown by the recent decrease in rural banking offices and an increase in the bank density ratio. In spite of having 70 percent of the banking offices, the rural areas represented less than 20 percent of total bank assets and a declining share of bank loans averaging about 20 percent for 1977-1986.

The relation among growth rates of real GDP, bank deposits and loans was analyzed. The overall period was broken into two subperiods divided at 1981 because completion of interest rate deregulation on deposit instruments occurred that year. During the first period, the growth rates in GDP, deposits and loans were positive, with the urban rates relatively higher than the rural rates. During the second period, all growth rates were negative in both the rural and urban areas but there were important differences. The rate of decline in deposits was slower but the decline in loans was much faster in rural areas than in urban areas, thereby causing the rural-to-urban transfer of funds. One explanation to this was the fact that the interest rate paid on government certificates was very high so it is reported that some banks shifted part of their portfolio out of loans into these certificates. On the deposit side, it is clear that compared to urban areas, rural deposits did not grow with the prosperity of the 1970s nor did they decline alongside the recession of the 1980s.

Two additional financial deepening measures of loan:GDP and deposit:GDP ratios are presented. The decline in the loan: GDP ratio in both urban and rural areas after 1983 implies that self-finance and, most likely, informal finance played increasingly important roles in financing rural economic activities. A different picture emerged with deposits. The decline in deposit: GDP ratio during the recession was slower than would have been predicted by the path of the increase observed during the expansionary period.

### *Policy Implications and Recommendations*

Governmental efforts to expand the access of the rural population to financial services resulted in an expansion of rural banking offices up to 1983 when they exceeded 2,600 units, but began to decline afterwards.

The rural deposit: GDP ratio continued to increase in the 1980s despite a decline in rural banking offices and in per capita GDP. Several factors lie behind this result such as the increment in the real rate of return earned on deposits, changes in income distribution, the effect of learning the banking habit, and more aggressive deposit mobilization by banks.

Past emphasis on encouraging rural banking through heavy subsidies and easy access to government funds may have discouraged lending institutions, especially RBs, from aggressively pursuing deposit accounts. The regulated interest rate structure along with high inflation may have also been a disincentive. The current contraction in rural banking offices is a disappointing development because of the increase in depositor transaction costs that may occur when accessibility is reduced. In spite of a long history of government efforts, a considerable urban bias in the financial system still exists.

## **"Borrower Transaction Costs and Credit Rationing in Rural Financial Markets: The Philippine Case"**

by Virginia G. Abiad, Douglas H. Graham and Carlos E. Cuevas

Borrower transaction costs, the main concern of this study, comprise the actual cash outlay and the opportunity cost of time spent in applying for, securing and repaying a loan. The longer the time taken to evaluate and process a loan, the greater the transaction costs for the borrower. Lengthening of processing time is a common tool of credit rationing.

### *Objectives of the Study*

This study looks at the role of borrower transaction costs in rural financial markets (RFMs) in credit rationing. More specifically, its objectives are: to quantify borrower transaction costs; to identify the factors that determine and are determined by the level of transaction costs; and to determine the role of transaction costs as a credit rationing mechanism in RFMs, during the period of interest rate regulation and after the deregulation of interest rates. The following questions which operationalize the above objectives are addressed:

- What is the magnitude of borrower transaction costs?
- How do borrower transaction costs affect borrower demand for and access to credit?
- What are the determinants of these transaction costs?
- Is credit rationing through transaction costs relatively more widespread and important when interest rates are restricted than when they are deregulated?

### *Findings*

The three largest expenses (cash outlay) incurred by a borrower in the process of applying and receiving his loan were fees (43%), transportation (29%) and food (22%). Of the opportunity cost of time, about two-thirds was due to time spent in the bank premises; the rest was due to time travelling to and from the bank. Rural bank borrowers incurred lower peso transaction costs than non-rural bank borrowers.

The empirical results of the study show that transaction costs are an important determinant of loan demand. The results indicate that transaction costs, as one component of the cost borrowing, may be a more important determinant of loan demand than the explicit interest rate, at least in a rural-based community. Other determinants of loan demand found statistically significant include: (1) the year of the loan (regulated or deregulated period) which is negative; (2) the area of land owned which is positive; and (3) the level of education which is also positive. The negative sign for the variable Year shows that loan demand was greater in the regulated than in the deregulated period. This may indicate that the decline in transaction costs occurring with deregulation was probably smaller in magnitude compared to the increase in interest costs due to

liberalization. As a result, the total cost of borrowing (interest rate plus transaction costs) was higher in the deregulated period.

The empirical results also show that two significant factors affect transaction costs: type of bank and distance to the bank. The dummy variable for bank shows that transaction costs are higher for rural banks than for non-rural banks. This could be due to the large amount of supervised loans handled by the rural banks, which carried with them highly time-consuming screening and procedural requirements. On the other hand, the dummy variable for Distance has a positive coefficient, implying that borrowers who live farther from the bank will have higher transaction cost.

Transaction cost was found regressive in impact in both regulated and deregulated periods. Small borrowers are therefore penalized by an additional "tax" on borrowing over and above the interest rate, at rates proportionally greater than those paid by medium and large borrowers. The regressive nature of transaction cost was also confirmed after getting the proportion of transaction costs to the nominal interest rate. In both the regulated and deregulated periods, transaction costs as a percentage of nominal interest rate is seen to be higher for small loans than for large loans. This regressive trend remains high on the deregulated period, with the tax on small loans greater than that on medium and large loans by 164 percent and 2,412 percent, respectively. One would have expected this regressive incidence to be reduced during the period of deregulation. But this did not occur.

### *Policy Implications and Recommendations*

Three major conclusions are drawn in the study. First, transaction costs play an important role in the demand for credit and in rationing credit among borrower classes. Second, lifting interest rate restrictions decreased the absolute level of transaction costs in the deregulated period, but the change was not statistically significant, indicating that some barriers still may prevent its full effect. Third, transaction costs in the Philippines as elsewhere, have a regressive impact on borrowers.

To increase the efficiency of financial intermediation, steps are required to minimize transaction costs for borrowers and lenders. One measure concerns streamlining the information gathering procedures, particularly those complying with Central Bank requirements. This is especially true for supervised and special credit programs channeled through the rural banks with substantial amount of processing and documentation that goes into the loan process of these banks. The burden of streamlining the documentation process should fall on the government, specifically the Supervision and Examination sections of the Central Bank. Another step is the provision of more roads, bridges and other improvements in rural transportation which can help reduce transaction costs in travelling to and from the bank. A solution to the problem of the low accessibility of banks and the low bankability of farmers, is the promotion of linkages between banking institutions and self-help groups (SHGs) to reduce the transaction cost of rural finance to marginal clientele. The SHG solution makes bankable the previously non-bankable farmer through his membership with SHG. The transaction costs for the borrower and the lending and information costs for the lenders, under such an arrangement, would be significantly lower, and the risk the small borrower will be rationed in favor of the big borrower is minimized.



## **"Guarantee Schemes: An Alternative to the Supervised Credit Program"**

by Marife Magno and Richard L. Meyer

### *Objective of the Study*

The paper examines the effectiveness of the credit guarantee programs in increasing the amount of credit for agriculture and indigenous industries. Specifically, the following issues will be addressed:

- Do guarantee programs lead to *additionality* in agricultural lending?
- Do guarantee programs contribute to small loans?
- Do guarantee programs encourage banks to use their own funds?
- Do guarantee programs reduce the cost of lending to banks?
- How cost effective are the guarantee programs?

The study focuses on four existing guarantee programs of the government --- Guarantee Fund for Small and Medium Enterprises (GFSME); Industrial Guarantee and Loan Fund (IGLF); Quedan Guarantee Program (QGP); and Crop Insurance Program (CIP).

### *Findings*

For GFSME, IGLF, and QGP, the amount of guaranteed loans has been increasing in real terms in 1984-1986. The bulk of loans guaranteed came from KBs, followed by PDBs and RBs. This is not surprising, since KBs represented most of the accredited banks. Under the GFSME and IGLF programs, average loan size falls within the P1M-P2M bracket. Similarly, under the QGP, loans from the Farmers Group (FG) have become unpopular among banking institutions, while loans for Food Traders and Processors (FTP) and Market Retailers (MRP) have been increasing. These findings suggest the preference of banks for fairly large-sized loans.

In terms of repayment performance, the GFSME and QGP seem to be doing quite well, boasting a repayment rate of more than 90 percent. IGLF repayment performance is not as impressive as GFSME and QGP as repayment rates average only about 50 percent. The success of the guarantee programs depends to a certain extent on the ability of the implementing agencies to sustain their financial viability and credibility. The costs incurred in operating the schemes give some indications of their overall performance. Among the guarantee programs, the IGLF has the least cost per peso incurred which amounted to P0.019, followed by CIP (P0.050), and then GFSME (P0.11). GFSME, however, registered the highest income among the programs due to the good repayment rates.

Even though the volume of guaranteed loans was increasing in real terms, guaranteed agricultural loans represented only an average share of 2.8 percent to the total agricultural loans

granted by the banking institutions. Among the banks, PDBs have the highest share of guaranteed loans in their loan portfolio followed by RBs. Nonetheless, the increase in the amount of guaranteed loans suggests a positive attitude of banks towards guarantee programs. However, this increase vis-a-vis a declining share of agricultural loans to the total loan portfolio of banking institutions indicates no net addition to loan granted to the agricultural sector. A substitution must have occurred. Unfortunately, there is no information on agricultural loans granted by banking institutions from their own funds or agricultural loans rediscounted to determine whether banks have been using the guarantee programs as a "liquidity window".

A rough way of determining the extent of utilization of bank funds is to compare the volume of agricultural loans with the deposits mobilized by banks. Despite the increase in real deposits, the share of agricultural loans to deposits was declining on an annual average of 12 percent from 1981-1986. This implies that the program has not succeeded in encouraging banks to lend their own funds to priority sectors of the government, in particular to agriculture. Thus, there are indications that banks have viewed these programs more as a source of additional loanable funds than a risk-reducing mechanism for loans from their own funds.

Various problems have been encountered in operating the guarantee schemes. The most common problem cited is the longer time spent in servicing guaranteed loans due to cumbersome and voluminous requirements such as: (1) the requirements for feasibility studies, project plans, audited financial statements, etc.; (2) the mandate from the Central Bank or the Guarantee Board to closely supervise guaranteed loans due to a greater possibility of credit being diverted to other uses; (3) the assurance that the loans accepted by banks will be approved by the Guarantee Board and, thus, the need to abide by the rules and regulations of the Board; and (4) the risk of borrower default. On the other hand, there are benefits to banks participating in these guarantee programs. The most common is that guarantee programs portray an image of stability to the bank. This is so because accredited banks are chosen based on rigorous banking criteria which include: no arrearages with the Central Bank and that the arrearages on total loans outstanding should not be greater than 10 percent; and no deficiencies in reserves on deposit liabilities and must have a sound and efficient management.

### *Policy Implications and Recommendations*

As a whole, guarantee schemes have not significantly improved the amount of credit to agriculture. At least, the schemes succeeded in encouraging banks to participate in the program. Credit guarantee programs can only effectively support agriculture and indigenous industries under the following conditions: (1) banks as well as borrowers are willing to participate in the schemes; (2) banks use their own funds for on-lending; (3) the extent of bank participation is not limited to satisfying the requirements of the program or boosting their viability; (4) the program is able to cater to their intended clientele; and (5) guarantee programs can have enough income to cover their costs. Moreover, guarantee programs will successfully prod banks to voluntarily increase their loan portfolio if the overall costs --- i.e. risk-related and administrative --- decline. Enhancing borrowers' credit worthiness is an important means in reducing these costs.

Because of stringent accreditation procedures, only KBs are likely to meet the accreditation criteria. Not surprisingly most loans under the guarantee programs are fairly large-sized since many accredited banks are KBs more familiar with the large urban-based industries. This runs counter to the objective of guarantee programs to cater to small borrowers or rural-based industries.

The findings demonstrate the difficulty of effectively "pushing" credit to priority sectors in spite of huge resources spent over the years in interest subsidies, rediscounting schemes and now guarantee schemes. One wonders if more wouldn't have been accomplished if such resources were diverted to remove obstacles discouraging lenders from serving this clientele. These include the lack of information about expected commodity prices, poor or non-existent information about the indebtedness and post repayment record of prospective borrowers, underdeveloped markets for farm input and output.

## **"Comparative Management Structure and Institutional Performance in Rural Banking Institutions"**

by Cesar G. Saldaña

### *Objective of the Study*

This study intends to describe and evaluate the observed management structure, policies and practices of three major types of banking organizations operating in the rural areas. The results are designed to contribute to a better understanding of how government policies and market conditions determine the management setup of these institutions and influence their operating and financial performance.

### *Findings*

The great disparity in asset size and relative importance of each banking function accounts for organization structure differences. An extensive branch structure for commercial banks can also lead to differences in managerial authority compared to unit banks like RBs and PDBs with less branches in far-flung places.

Unit banks can be expected to maintain more organizational levels compared to branch banks. Unlike unit banks, branches of commercial banks can maintain common support services at the central office or regional level. Well-developed operating guidelines may also allow KB branches to operate with minimal supervision.

KB branch managers are allowed higher loan approval limits than the PDB managers, although the latter's limits are not too far behind. Disregarding other factors, higher loan approval limits correspond to a "decentralized" set-up. Factors such as better knowledge of local conditions, availability of centrally administered guidelines and faster or more personal service are some reasons for allowing PDB and KB branch managers more discretion on loans.

The nature of deposit campaigns depends on the rural financial intermediary (RFI) type. KBs anchor their campaigns on a motivated internal bank staff by giving them incentives to contact more people and enlist them as depositors. On the other hand, KB and PDB branches' campaigns are comparatively more customer-oriented, usually with raffle prizes to depositors and TIPID movement schemes. Most RB and PDB deposit campaigns are initiated by the branch but for KB branches, the mandate comes from the head office.

There is segmentation in the loans market of RFIs reflecting a difference in loans market targets or clientele across RFI types. Personal visits/contacts by the bank staff are regarded by the RFIs as more effective than posters, souvenirs and giveaways in advertising loan services.

The importance of loan collection is emphasized by all RFIs; thus, incentives in the form of merit increases and bonuses are given for effective collection efforts by the bank staff. Many RFIs provide incentives to borrowers for early or prompt loan repayment through interest rebate, increased assurance of new loans and interest discount on new loans.

Unit banks --- RBs and, to some extent, PDBs --- are organized for a balanced offering of deposit and loan services within their own regulatory restrictions. These RFIs tend to show more organizational levels, hierarchical in staff relationships, and organizational positions compared to branches of KBs. The hierarchical and multi-level structure of unit banks is related to the higher overhead cost structure and lower return on asset performance of these banks.

### *Policy Implications and Recommendations*

Faced with a market condition of income regulation, the RFI seeks low cost internal arrangements. If the regime is one of deregulation, RFIs will seek highest portfolio returns while keeping low-cost sources of funds. Agricultural loans will decrease if loan interest rates become too regulated or if urbanized loans yield more returns under deregulation.

Unit banks (rural banks and private development banks) operate more like community banks, serving the deposits and lending needs of the local area. Not similarly oriented to community banking are commercial bank and development bank branches, being subject to central decisionmaking authority on deposit and loans policy.

The issue of "small" lending portfolio by commercial banks in the local area may be associated with a combination of factors like a "cliente" effect, poorly developed loans market and a continuing signal from bank head offices that large loans are encouraged. The higher salary and cost structures of commercial banks appear to deter them from developing their branches into community banking. These factors also make larger loans a prerequisite for profitability of loan accounts.

Given the current state of small loans market, management's deployment of its staff into loans and deposit functions serve to indicate whether it emphasizes loans or deposits. Policymakers interested in periodic assessment of the banking functions of RFIs can avoid the high costs of financial audits by looking instead at this surrogate indicator.

The ownership aspect of RFIs appears a key variable in management decisions and RFI performance. Innovations must be made regarding traditional ratios. Policy analysts should interpret regulations in the light of wider options available to commercial banks toward a better understanding of intended effects.

There is an impression that certain current conditions must be addressed to bring about an organized development of the rural financial system. One pertains to the competition of "restricted" rural banks and "centralized" commercial bank branches. Profit-seeking behavior (and restrictions or lack of it) made rural banks more community-based and commercial banks more centralized in loans.

The exhortations by policymakers for commercial bank branches to be more "community and small business-oriented" will not necessarily be followed by RFIs unless rural loans grow larger. A better understanding of branch operations and incentives to owners and managers of rural financial institutions should enable government and analysts to understand the impact of planned regulations and credit programs.

## **"Transaction Cost and the Viability of Rural Financial Intermediaries"**

by Teodoro S. Untalan and Carlos E. Cuevas

A vital aspect of the formal financial system, transaction cost affects the bank's operational capability and largely determines the bank's viability as an intermediary. This paper attempts to examine the transaction cost of banks.

### *Objectives of the Study*

The aims of the study are:

1. To develop a method of estimating transaction cost for each bank activity, i.e., lending cost, funds mobilization and general administration; and
2. To explain the differences and the composition of transaction cost among commercial banks, private development banks, and rural banks.

### *Findings*

KBs have a larger portion of their transaction cost contributed by funds-mobilization than their lending operations. The opposite is true for RBs. PDBs have a balanced operation on both funds- mobilization and lending. This emphasizes the fact that KB branches are funds-generating units while RBs are more lending oriented.

KBs have a higher percentage of their lending cost accounted for by loan processing compared to PDBs and RBs. This may be due to more extensive credit investigation of collateral offered among KBs. Loan recovery cost also accounts for a greater share of lending cost among KBs and PDBs.

Among KBs and PDBs, a greater proportion of the transaction cost on funds-mobilization is attributed to deposit-mobilization activities. For RBs, the greater portion comes from mobilizing funds from the CB rediscounting window.

The cost per outstanding loan is lowest for RBs and highest for KBs. But the cost per peso of outstanding loan is lowest for KBs and highest for RBs. The cost of granting a loan is lowest for RBs than either PDBs or KBs. The per peso cost of granting a loan, is also lowest for RBs than PDBs or KBs, although the differences among the banks are not significant.

The cost of mobilizing each deposit account is higher for KBs and PDBs compared to RBs. In contrast, KBs obtain the lowest cost of mobilizing per peso of deposit, followed by PDBs more than RBs. This may be attributed to the higher volume of deposits mobilized by both KBs and PDBs.

### *Policy Implications and Recommendations*

The fact that KBs and PDBs have relatively lower cost per peso of loan and cost per peso of deposit mobilized than RBs indicates their comparative advantage in both funds-mobilization and lending activities. But this does not require smaller banks carrying mostly agricultural loans in their portfolio to go into large-scale lending to reduce their per-peso cost. In a related study (Untalan 1988), agricultural lending is not a significant determinant of bank transaction cost.

Additional capitalization requirements for smaller banks would permit them to exploit economies of scale in their operations. Bigger operating capacity for smaller banks would lower their transaction cost and thus effectively lower their average cost of delivery. Thus, the removal of the 25 percent limit on capital subscriptions would enable the bank to expand their capital base.

Increased competition in the banking system will be beneficial in reducing transaction cost in the long-run since RFIs would be forced to produce these bank services at the lowest possible cost to remain profitable. Thus, liberal bank entry should be pursued. This will also allow banks to expand their operations and eventually improve their performance through economies of scale.

Improving farm productivity can also be a way to decrease transaction cost of banks as this directly lowers the risk faced by banks. Likewise, reducing the risk in credit may be associated with improvements in infrastructure such as farm to market roads, irrigation, availability of better farm inputs and equipment, better education to farmers of modern techniques of farming, marketing assistance, and appropriate pricing policies.

Finally, an improvement in rural household income can be translated in terms of the increase in number and size of loans by the banks. Both have decreasing effects in the per-unit and per-peso cost of delivery for these rural financial intermediaries.

## **"The Role and Performance of Cooperative Credit Unions in the Rural Financial Markets: Some Preliminary Results"**

by Mario B. Lamberte

### *Objectives of the Study*

This paper presents the partial report of the study on cooperative credit unions (CCUs). The specific objectives of the paper are: (1) to briefly review various approaches to analyzing the behavior and performance of CCUs; (2) to discuss the performance of the eight rural-based CCUs and compare it to that of the ten urban-based CCUs and of the entire banking system; and (3) to estimate the demand for CCU shares.

### *Findings*

The growth rates of rural-based CCUs before 1984 were at least comparable with those of the urban-based CCUs and the banking system. The balance-of-payments crisis that struck towards the latter part of 1983 fell more heavily on the rural-based CCUs. While urban-based CCUs bounced back quickly, rural-based CCUs recovered very slowly. However, they proved to be more resilient.

The loan portfolio of the eight CCUs averages 90 percent of their total assets. This is not surprising since their primary function is to extend credit, and that they are not subject to any statutory reserve requirement. In 1987, the average amount of loans granted by these CCUs was P3,544. Indeed, rural-based CCUs cater to small borrowers.

Savings mobilized by CCUs are small. Resources of the rural-based CCUs mainly come from fixed deposits or share capital. On the average, the share of fixed deposits ranges between 78 to 84 percent of the total resources during 1981-1987.

Interest on fixed deposits depends on the profits realized by the CCU at the end of the year. In certain years, no interest is given on deposits because either profits are low or the CCU has certain projects to finance.

Usually, CCUs do not write off loans because this amounts to terminating one's membership. Interviewed CCU officers said they try to improve loan collection and, at the same time, reeducate their members. Meantime, with greatly reduced loanable funds, CCUs have resorted to queuing.

The demand for credit union shares was estimated, using the ordinary least squares method. The linear form yielded the best results among several forms. Income is observed to have a statistically significant negative effect on the demand for credit union shares. The implication is that members consider credit union shares as an inferior financial asset. This is plausible since CCUs are organized primarily to provide low-income individuals/households access to financial services. Wealthier individuals/households have more access to the financial services of the formal banking system.



Another factor that yielded significant positive sign is the amount of the most recent loan obtained by the members from the credit union. The results suggest that the larger the amount one wants to borrow, the higher is his/her demand for credit union shares. This reciprocity enjoyed by all CCU members of good standing is perhaps the most important feature low-income individuals/households find attractive.

The number of years as a member of the CCU, used as a proxy variable for the degree of confidence one attaches to his/her CCU, is found to bear a statistically significant positive effect on the demand for credit union shares. Long-time members, who have enjoyed the benefits of being CCU members and known fully well its operations, tend to patronize more their own CCUs. As a whole, the model can still be improved upon, once the data for other CCUs become available.

### *Policy Implications and Recommendations*

CCUs can operate in remote barrios not even reached by rural banks. This indicates their great potential in delivering financial services to the small rural entrepreneurs and low-income households. Indeed, operating in a small barrio ensures them of obtaining a homogeneous membership similar to what institution- and urban-based CCUs are enjoying. Information costs and costs in mobilizing deposits and of servicing loan accounts can be kept low when members are relatively homogeneous and are living or working close to each other.

CCUs can handle more readily the liquidity problem often encountered by unit banks without any funds transfer operations. This can be done through an interlending scheme, an area where government technical support can be given to the CCU system. Similar support can also be extended to federations of credit unions providing specific training programs for members in the primary cooperatives (i.e., bookkeeping, record-keeping, etc.).

Having CCUs interlinked credit with other markets can achieve the efficiency goal, since administrative and risk costs can be reduced, as well as the equity goal, since the benefits can be widely distributed to members, unlike the case of banks owned and controlled by a few families.

Finally, some kind of a deposit insurance scheme will allow CCUs to enhance further their savings mobilization drive. This will make CCUs less vulnerable to runs on deposits. Aside from encouraging members to increase their deposits, such a scheme can also promote more interlending among CCUs.

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**ANNEX II**

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**RURAL SAVINGS MOBILIZATION PROJECT****"Deposit Mobilization in Rural Banks: The Impact  
of Alternative Strategies"**

by Jocelyn Alma R. Badiola and V. Bruce J. Tolentino

*Objectives of the Study*

The study aims to determine the deposit performance of a selected group of rural banks and to identify the factors that affect their deposit-generating performance, including the effectiveness of specific strategies and conditions. This study seeks to demonstrate the effectiveness of specific strategies in mobilizing deposits in rural areas of the Philippines.

*Findings*

Eighteen rural banks were chosen for the project. Three types of saving schemes/strategies were adopted by the participating banks: schemes that motivated bank personnel to solicit deposits; strategies that encouraged existing depositors to put in more savings as well to attract new savers; and advertising of the deposit handling of banks.

Of the seven rural banks that implemented saving strategies, five registered positive nominal growth rates in deposit levels in 1988. The growth rates ranged from 8.1% to 62.8%. In real terms, some banks posted low positive growth rates due to: (1) problems in management, particularly the long absence of the manager from the bank due to illness; and (2) the absence of conscious effort in generating deposits from the community which is especially true for banks that concentrated their efforts and resources in recovering past due loans. On the other hand, banks with negative growth rates in their deposit levels cited the following reasons: (1) lack of commitment towards the implementation of the project; (2) availability of alternative sources of loanable funds such as the rediscounting program of the Land Bank of the Philippines; (3) negative perception about savings campaigns; (4) heavy withdrawals due to large transactions undertaken by bank clients, composed mostly of agricultural entrepreneurs; (5) presence of other financial institutions in the municipalities within which the banks operate.

Among participating banks, total cost of mobilizing deposits reached more than P1 million or an average of P183,000 per bank in 1988. The bulk of the cost came from activities directly related to transactions with bank clients from the opening of new accounts to over-the-counter transactions with depositors in accepting deposits and in withdrawals. The other components of costs of deposit mobilization include record-keeping (33%) and advertisements and promotions (12%). On a per-account basis, the total cost of mobilizing each deposit account considering all

banks was P40.00. With respect to the cost per-peso of deposit, P0.029 was estimated for all banks.

### *Policy Implications and Recommendations*

This study argues that banks can mobilize savings successfully in the rural areas under certain conditions that include an effective savings strategy, a favorable economic environment and a strong commitment by bank management with respect to the implementation of the strategy. The scheme was one of "mobile banking", where bank staff members personally serviced the deposit and withdrawal requirements of clients, cutting down the transaction costs of depositors. Other schemes that successfully increased the volume of deposits of rural banks included intensive savings campaigns or information drive, gimmicks that offered prizes to depositors such as raffle draws, raising or maintaining interest rates at a level much higher than those offered by commercial banks and other large banks in nearby towns and cities and giving incentives to bank employees to encourage them to solicit deposits from old or new clients. Strategies requiring personal contact with the public appeared most effective.

A savings mobilization scheme will however fail if the bank does not enjoy the confidence of the public and does not commit itself fully to the implementation of the saving strategy and if the public itself remains indifferent due to prevalent economic difficulties. This implies savings mobilization depends on both financial and non-financial factors, including bank stability and a favorable economic environment.

## **"Interest Rates and Savings Mobilization: Empirical Evidence from the Philippines"**

by Marife Magno and V. Bruce J. Tolentino

### *Objectives of the Study*

This paper examines the effect of interest rate on households savings behavior; in particular, how it induces rural households to save in financialized form. Financial savings come in various forms - stock, bonds, insurance claims, deposits in banks, and cash. Since deposits are the major financial instruments in the country, the study specifically looks into the effect of interest rates on households' decision to maintain deposits in financial institutions. The specific objectives are: (1) to examine the type of interest rate that affects a household decision to save in banks; (2) to determine whether a household response to interest rates differs significantly, given certain household attributes (i.e. gross income and level of education); and (3) to examine the effect of transaction costs on a household decision to deposit and determine whether this effect varies, given certain household attributes.

### *Findings*

Seven regression models were run on household deposit behavior. The first two are logit models where the effects of different forms of interest rates and transaction costs are examined. The third employed an ordinary least squares (OLS) method to determine the marginal propensity to deposit with respect to interest rate. The last four are logit interaction models of interest rates and transaction costs vis-a-vis household income level and level of education.

The positive relationship between interest rates and willingness to save in financial institutions is observed using normal, real and effective savings deposit rates. However, only the nominal and real savings rates are found significant. Since the effective rate differs from the real rates in terms of the transaction costs, this finding can also be interpreted as the insignificance of transaction costs in a household decision to save in bank. This result is contrary to what is expected, implying that in general rural households are more attentive to inflation than to transaction costs.

While savings interest rate on deposits is noted to be a major factor in a household decision to save, it is observed that this rate is not a significant factor in determining the level of deposits of households. There are various possible explanations for this. First, rural households are "target savers" are those whose deposits are proportionate to the level of income rather than expected return. Second, the expected increase in income from a higher savings interest rate may be minimal and therefore does not effectively induce households to increase their deposits (that is the net income-effect is negative). Third, rural households are constrained by their income; hence, they cannot respond readily to economic incentives. Fourth, the minimal variations in the interest rate data contributed to the inability of the model to capture the effect of interest rates.

Income is a positively and highly significant factor, affecting household decisions to deposit. When interest rate was allowed to interact with income, the model yielded coefficients not statistically significant, indicating that the response of households on interest rates is the same across income levels regardless of income status.

Education is noted to have a negative and highly significant effect on a household decision to deposit. This effect is found consistently for all types of interest rates. This can be explained by the fact that highly educated households have a more stable income source and are exposed to more consumption and investment opportunities. They are, therefore, faced with more alternatives where they can invest their money.

The interaction model on transaction costs and income class reveals that transaction cost is a major decision variable for savings. For the low-income earners, transaction cost is found to have a significantly negative effect on households' decision to deposit.

#### *Policy Implications and Recommendations*

The results of this study validate the "interest rate elasticity" hypothesis on the saving behavior of households. In particular, the saving deposit rate is noted to have a positive impact on the desire of households to hold savings in financialized form and, therefore, becomes an important determinant of rural households deposit behavior. Interest rate, however, is noted to have no significant effect on the level of deposits of households.

Since inflation and transaction cost directly reduce depositors' net returns, policies designed to minimize the impact of inflation and transaction costs on deposits should be pursued. These include eliminating ceilings on interest rates, barriers to branching, gross receipt tax, and loan targeting (e.g. PD 717). These policies raise intermediation costs, cause a shortage of loanable funds and thus curtail the development of financial intermediation. Likewise, other government policies which run counter to the efforts of mobilizing deposits intensively must be reviewed. These include the offering of higher interest rates on treasury bills which makes savings and time deposits less competitive and thus divert funds from financial intermediaries, and various government "liquidity" programs for financial institutions that put savings mobilization efforts in second priority. In sum, eliminate regressive financial regulations to increase savings, bring down loan interest rates, promote bank expansion and increase investments.

## **"Dependency, Education, Attitudes and Household Savings: Empirical Evidence from the Philippines"**

by Jocelyn Alma R. Badiola

### *Objective of the Study*

This paper addresses the fundamental question: to what extent do socio-demographic factors --- particularly, education, dependency, and attitudes --- influence household saving behavior in the Philippines?

### *Findings*

In this study, two measures of savings were used: (1) total household income less total current expenditures plus educational expenses (TOTSAVE); and (2) total deposits in banks and other institutions (TOTDEP). With each saving measure, two variants were adopted: total savings and per-capita savings. Three variations of dependency were also used particularly: children (DEP1); members above 65 years (DEP2); and all unemployed household members regardless of age and including those within the "working age group" (HHDEP).

All three variations of dependency were found to exert a significant impact on the level of savings but the signs of the coefficients varied according to each definition. Empirical results show that children stimulate or encourage saving among households. The possible explanations include: (1) household heads highly value the education of their children; (2) household heads view saving as the means to prepare their families for any emergency occurrence such as shortfalls in income, sickness, death, and the like; and (3) household heads assume multiple jobs just so they can sufficiently provide for the needs of their children. On the other hand, the variable DEP2 yielded the expected negative sign which supports the life-cycle hypothesis that retired individuals earn less and, consequently, drain household savings. The variable HHDEP also yielded the expected negative sign.

On financialized savings, the empirical results show that none of the dependency variables showed a significant influence on the level of deposits, although these variables yielded the expected negative sign.

While education was found with a significant influence on household savings, it yielded a negative sign contrary to an expected positive impact. By educational level, household heads who either reached or completed the elementary level tend to save more than those with a college or higher level of education. On the other hand, education did not exert a notable influence on the level of financialized savings.

The dummy variable for attitudes, specified as the attitude of household heads toward saving in banks, was also entered into the saving models. The variable yielded statistically significant negative sign, implying that households preferring to save in banking institutions hold lesser surplus funds. In particular, households that realize the importance of saving in banks hold

lesser surplus funds primarily because they are more aware of the various forms to hold their savings including education, bank deposits, consumer durables and housing, among others.

### *Policy Implications and Recommendations*

While non-economic factors may be less responsive and manipulative to government policies than economic variables, a comprehensive and complementary set of policies addressing both economic and non-economic issues must be formulated to ensure an effective savings mobilization program in the countryside.

Since education of children is highly valued by rural households motivating them to save more, certain saving schemes to link bank deposits to educational plans or insurance may be undertaken. Strategies like providing special educational plans with relatively lower premiums to those maintaining a certain deposit amount may attract households to save in banks. Similarly, encouraging rural households to save may be achieved by: (1) increasing yields through higher interest rates and the use of tax policy (e.g. removing withholding tax on interest income); (2) increasing confidence of households in financial institutions and making them more accessible; (3) disseminating information as part of savings promotion and linking it to acquisition of goods (e.g. housing, education); and (4) protecting savings and investments against loss of value through inflation. Moreover, classroom teaching must incorporate a course on rural finance to orient students on the importance of savings mobilization vis-a-vis the rural financial market and rural development.

## **"Income, Savings and Deposit Performance: Evidence Among Rural Households in the Philippines"**

by Florida Chan and V. Bruce J. Tolentino

### *Objective of the Study*

This paper attempts to describe the nature of financialized savings behavior of rural households in the Philippines. The relationship between financialized savings and income, focusing not only on farm households but also on non-farm households will be analyzed. Some of the questions dealt with in this paper include:

1. Is income the most significant determinant of the level of deposits among rural households?
2. In what way does the level of income affect the households deposits behavior?
3. How does the source of income influence the level of financialized savings among households?
4. Do farmers save more than professionals?
5. Do wage-earners save more than self- employed households?
6. In what forms do rural households save?
7. Does the form of saving vary across income sources?

In this study, two analytical procedures were applied for the deposit model. Logit regression was employed to predict the probability of a household having bank deposits. Ordinary least squares (OLS) was applied to determine the effect of income on the level of financial savings.

Regression estimates obtained from a linear savings function for the 974 households categorized by major occupation of household heads show that their marginal savings propensities out of current income ranged from 16 to 60 percent. Fishermen obtained the highest marginal propensity to save. In terms of income sources, non-agriculture is higher than agriculture, while employed is higher than self-employed. With regards to the latter, this implies one of two things: (1) the regularity and fixity of income of employed persons may have encouraged them to set aside an amount for savings; and (2) for self-employed households, the preference to invest in their trade/businesses rather than save may be stronger, given that deposit rate is close to negative in real terms.

The study also tested several model specifications using various definitions of income to determine which income definition best explains the households' savings performance, namely: (1) current income; and (2) permanent/transitory income. For the pure income model, the current income variable yielded statistically significant positive sign. Regression estimates using dummy variables based on the occupational categories of the household head (with wage earners [OCCUP5] as the reference point) indicate that four categories have significant coefficients, those



for OCCUP1 (farmers), OCCUP2 (fishermen), OCCUP4 (farm laborers) and OCCUP7 ("others"). This means that at the same income levels farmers, fishermen, farm laborers and households whose major occupations are classified as "others" save more than the rest of the occupational categories.

Empirical results also show that the variables permanent ( $Y_p$ ) and transitory ( $Y_t$ ) income yielded statistically significant positive signs. The coefficient of the transitory income variable, however, is higher than that of the permanent income variable implying that households save more out of transitory income. Likewise, almost the same results were obtained for the occupational dummies.

Other relevant factors that could influence savings decisions were included such as interest rates (INT), dependency ratio (DEPR), and educational attainment (EDUC) to determine how other non-income related factors affect household savings behavior. In both regression models using current income and permanent/transitory income, only the dependency ratio variable yielded statistically significant correct sign.

The empirical results of the logit regression model show that income is significant factor in the deposit decisions of households. Other factors which were found to be significant in household decision to deposit are education and interest rates. While the logit regression model indicates that the interest rate affects the households' decision to save, the OLS methods indicate otherwise. Several implications can be inferred from these results. When deposit decisions are made, households can rely more on income rather than on the expected returns on such investments. In addition, when households are limited by minimal income increases, they may fail to respond to economic activities.

#### *Policy Implications and Recommendations*

The results of the study suggest that given a more "stable" source of income, a larger proportion of income is saved as deposits. It may be that income sustained for a longer period encourages households to deposit.

Government efforts should focus on policies and programs designed to strengthen income and also provide alternative income- increasing livelihood opportunities in rural areas. These employment opportunities should not, however, be limited to agriculture or farm-related activities since earnings from non- agricultural undertakings make up a significant proportion in the total income of rural households. Nevertheless, increases in non-agricultural income should not hinder improvements in agricultural productivity. Improvements in agricultural productivity can be brought about by, among others, massive infrastructure and support services that would move employment opportunities to the rural areas and encouraging urban-based business firms to invest and expand in the countryside.

A large proportion of the total assets of the rural households is still in physical form. Thus, strategies to transform these assets in financialized form should be pursued. Banks, together with informal institutions, may be tapped as the primary channels and mobilizers of deposits in rural areas. Any savings strategy that should be adopted by banks to tap the savings potential of rural households must also operate under a favorable economic environment and a strong commitment by bank management to implement such strategy.

Finally, policies which discourage the transformation of savings into financial form must be reviewed. These include the policy imposing taxes on interest income from financial savings.

## **"The Saving and Deposit Performance of Philippine Rural Households: Advanced vs. Backward Areas"**

by Raquel Clar de Jesus and V. Bruce J. Tolentino

### *Objectives of the Study*

The basic question which the study attempts to answer is: Does the level of economic development of a given rural region or area significantly affect the deposit performance of the households in that area? The study therefore hypothesizes: the more developed an area is, the greater the level of savings/deposits of the households in the area.

The study examines the data and, using some indicators, ranks or classifies the areas according to level of development. Specifically, the paper documents differences in the savings as well as deposit behavior/performance of rural households; explains the disparities, if any, of the savings and deposit performance in relatively advanced and backward areas; and derives some policy implications from the results of the study.

### *Findings*

The general econometric model used in the analysis is based on the assumption that household saving is a two-staged decision process: the household decides on how much to save and to allocate to financial deposits. Thus, two econometric models were formulated: total household saving (SAVE) and financialized deposits (DEPO). Furthermore, two variants of the household saving model were considered: the model which does not consider bank accessibility (SAVE1) and the model which considers bank accessibility (SAVE2). Likewise, two variants of the financialized deposits model were considered: DEPO1 using total deposits for the period (flow) and DEPO2 using outstanding deposits balances as of the period (stock).

The regression results show that, in both variants of the household saving model, the variables nominal income (NY) and dependency rate (DEP) yielded the correct significant signs. The dummy variable for economic development (DUM=1 for advanced and DUM=0 for backward) yielded the correct significant sign in the model when bank accessibility is not considered. Nonetheless, this supports the hypothesis put forward in the study, i.e., that the economic development of an area exerts an influence on the savings behavior of households. Empirical results also show households in advanced areas are dissaving but households in backward areas had positive savings. The unexpected result reveals households in advanced areas have to reach a certain "threshold" income before positive savings occur. Economic development therefore may not necessarily induce households to maintain surplus funds. Although opportunities for additional income and exposure to banking operations may have increased with progress along with an anticipated increment in savings, these did little to influence savings behavior of households. It is possible that economic development instead exposed the households to a wide array of consumer/investment goods and services and magnified the "pull factor" on income.

The results for income validate the positive influence that income exerts on total household savings. Likewise, the number of dependents of households exerts a negative influence on their savings behavior. On the other hand, the variable on education yielded a negative sign. One explanation for this is the popular treatment of education as a form of savings, i.e., rural households save in the form of education since it enhances the ability to earn and reduces the precautionary motive of savings.

The empirical results on the financial deposits model in both variants show that only income (Y) --- or alternatively, wealth (W) --- constitutes the most important variable that influences portfolio decisions of the households.

### *Policy Implications and Recommendations*

The effect of progress is suspected to be more pronounced on the consumption side, supporting the findings of other researchers. Given this constraint, rural savings mobilization may be more effective if the financial/capital market can provide the households with investment opportunities to sustain income increases, and/or provide sources of funds (e.g. loans) that will finance the increased consumption levels as the household moves from a "backward" to an "advanced" state. This seems consistent with the requirement for "financial deepening" complementary to the economic development process.

Contrary to expectations, the study shows that interest rate increases and higher levels of education may not necessarily induce households to save out of income or keep these savings in financial forms. Interest rate has one major implication on savings mobilization efforts of banks. Banks should recognize the significance of other alternative strategies such as reduction of requirements, accommodating personnel, less formal transactions, raffles, and promotions in encouraging rural households to save and keep their money in banks. These strategies may prove more effective than pegging interest rates a few percentage points higher. More often, providing households with more opportunities to augment income and reduce dependency of their members is an effective way to promote rural savings.

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**ANNEX III**

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**CREDIT UNIONS STUDY****"Credit Unions: An Underrated Mode of Mobilizing  
and Allocating Resources in Rural Areas"**

by Mario B. Lamberte, Julius P. Relampagos, and Douglas H. Graham

*Objective of the Study*

The role of the cooperative credit union (CCU) system has not yet been fully understood nor appreciated. This study tries to contribute to the understanding of the behavior of one segment of the cooperative movement. Specifically, the paper analyzes the performance of CCUs in the rural areas. Since CCUs' performance depends to a certain degree on borrowing and saving patterns of members, this paper also examines such patterns from a sample of 200 CCU members. This study limits itself to eight sample CCUs located in Batangas, Laguna, and Pangasinan. These are the areas where some of the sample banks in the Comparative Bank Study jointly conducted by ACPC, PIDS, and OSU were selected.

*Findings*

Volatility has been observed in outstanding real assets of the eight CCUs. There are at least two reasons for the unsustainability of the growth in the real assets of CCUs: the excessive reliance on fixed deposits and the high incidence of overdue loans. The growth in fixed deposits hinges on three factors --- growth of CCU membership, loan ceiling imposed by the CCUs, return a credit union will give the fixed deposits.

Two the CCUs do not accept savings deposits. Likewise, only 48 percent of the sample CCU members have savings deposits in their respective CCUs with the maximum average outstanding savings deposit of P2,005. Indeed, savings deposits of members are small. One reason for maintaining small savings deposits is that this account cannot be used to increase one's loan capacity. For some credit unions, it is a standard operating procedure to require members to convert their savings deposits into fixed deposit, if they want to increase their loan capacity.

A collateral is generally not required by credit unions from member-borrowers. However, in case the amount of loan is extremely high and/or is beyond the borrower's loan capacity, a collateral may be required. In most cases, a borrower is required to have one co-maker. Seldom do credit unions disapprove loan applications. This was experienced by only three respondents. Normally, a credit union reduces the amount of loan approved, especially if there is a lot of pending loan applications instead of outright disapproval of the loan application.

The demand for credit union shares was estimated in this paper. The standard model of the demand for financial assets is being followed with some modifications to consider unique

characteristics of the financial instruments used by CCUs. Ordinary least squares (OLS) method was used in all the empirical testing.

Empirical results show the interest rate on fixed deposits has a significant positive effect on the demand for credit union shares as expected. This suggests that members increase fixed deposits due to a higher interest rate on such financial instrument. However, the estimated coefficients in all models using logarithmic form are far below one, suggesting that the demand for credit union shares is interest elastic. The demand for credit as represented by the amount of last loan has a statistically significant positive effect on credit union shares. This implies that members tend to increase fixed deposits if they raise the loan amount from the credit union.

### *Policy Implications and Recommendations*

Empirical results indicate that borrowing from the credit union exerts a positive influence in increasing the demand for fixed deposit. This has an important implication on rural savings mobilization. Given the present problem of inadequate supply of formal credit in the rural sector, rural savers can be encouraged to save and patronize a CCU in order to have access to credit union's borrowing privileges. This emphasizes the important role of CCUs in providing the essential financial services needed in the rural areas.

While internal problems pose an obstacle to the growth of CCUs, the lack of initiative to innovate poses a greater obstacle. In light of their expanding role in rural savings mobilization, CCUs must introduce new innovations in mobilizing savings deposits from their members. This requires the ability of the CCUs to effectively maintain low transactions cost associated with infrequent saving and frequent withdrawals of savings deposit accounts of members. This also requires employment of full-time staff to service deposits and withdrawals of members anytime. Likewise, as CCUs expand, the need for alternative sources of funds, like savings and time deposits, becomes inevitable.

In light of existing delinquency problems of the credit cooperatives, it is prudent to proceed with caution in mulling over the idea of making them conduits of lending programs in rural areas to avoid repeating the experience of the rural banking system. Despite their loan delinquency problems, CCUs are still relatively successful in mobilizing deposits in rural areas because of a unique system in dealing with depositors and borrowers. This makes their overall operation sustainable. Thus, it must be emphasized that making CCUs conduits in allocating resources should not undermine their savings mobilization efforts.

The question of supervision over cooperatives deserves equal attention. CCUs have the potential to grow into bigger financial institutions and, like formal financial institutions, can expand their areas of operation. In this regard, supervision of cooperatives should be placed under an appropriate agency or institution that can help their operations and address their own internal problems, and not a venue for serving other agenda and interests.



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